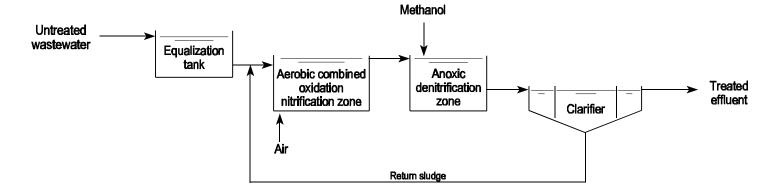
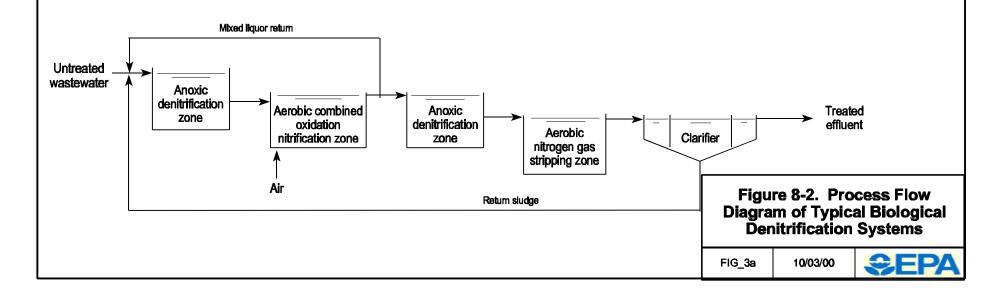


## A. End-of pipe denitrification system using an external carbon source



B. Recycle denitrification system using untreated wastewater as a carbon source



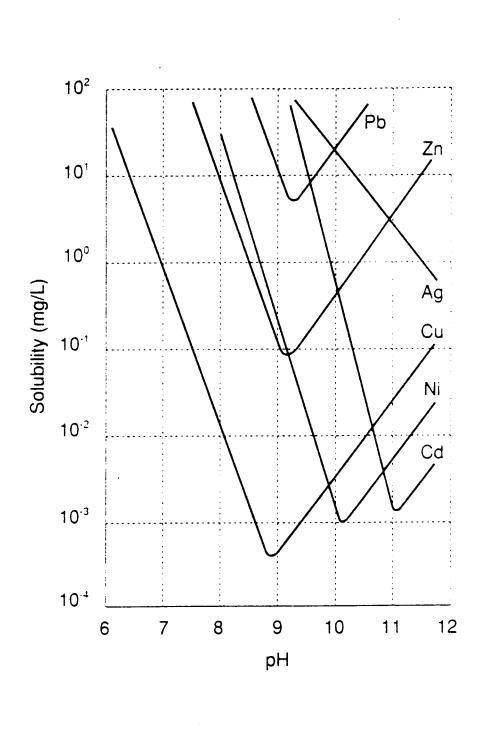


Figure 8-4. Minimum Solubilities of Various Metal Hydroxides

FIG\_4

10/03/00

SEPA

## Cyanide Precipitation Ferric sulfate Sulfuric NaOH Polymer acid To BAT-1 Effluent from Rapid mix Flocculation BAT-1 pH control biological tank tank treatment ammonia still Clarifier equalization tank To existing sludge dewatering Figure 8-6. BAT-2 for By-Product Recovery Cokemaking

BAT\_2

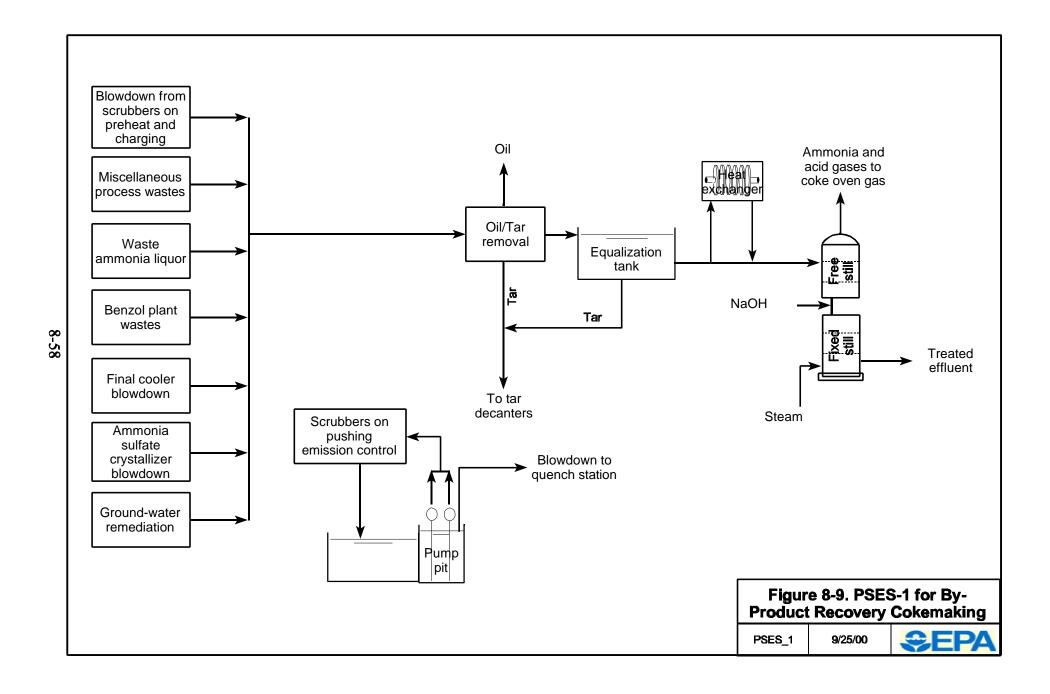
9/25/00

Treated effluent

9/25/00

BAT\_3

## Filtration and Granular Activated Carbon Backwash to Backwash to biological treatment clarifier biological treatment clarifier BAT-3 effluent from clarifier Granular activated carbon Granular activated carbon Filtration Treated effluent Figure 8-8. BAT-4 for By-Product Recovery Cokemaking 9/25/00 BAT\_4



## Cyanide Precipitation and Filtration Backwash to Ferric backwash holding to sludge dewatering sulfate Sulfuric NaOH Polymer acid PSES-1 Rapid mix Flocculation Filtration pH control effluent tank tank from still Clarifier Treated effluent To existing sludge dewatering Figure 8-10. PSES-2 for By-**Product Recovery Cokemaking** PSES\_2 9/25/00

